

ARTICLE 7 – IMPROVEMENT REQUIREMENTS

SEC. 7.0 PURPOSE.

The purpose of this chapter of the Subdivision Ordinance is to further describe “Stage 5 – Final Plat and Improvement Plan Approval” of the subdivision process, the specific responsibilities of the subdivider in the design, construction and financing of improvements and to establish procedures for review and approval of these improvements.

SEC. 7.1 GENERAL.

- A. Responsibility.** The subdivider shall be responsible for all costs, including review fees, for the installation of the improvements as a stipulation of zoning and/or preliminary plat which shall include, at least but not limited to, the following improvements:

1. Public/Private Sewers
2. Public/Private Water Supply Systems
3. Grading/Drainage/Storm Drains
4. Streets/Private Access Ways
5. Alleys (where applicable and approved)
6. Utilities (electric, telephone, cable television)
7. Street Lights (where applicable and approved)
8. Monuments and Signage
9. Landscaping and Streetscape
10. Multi-Use Pathways and Trails

- B. Streets and Public Easements.** All streets and public easements within the boundary lines of the subdivision shall be improved to cross-sections, grades, and standards outlined in this Ordinance or approved by the City Engineer. Where there are existing City streets adjacent to the subdivision, subdivision streets shall be improved to the intercepting paving line of such existing streets, or to a matching line determined by the City Engineer; transition paving, including turn lanes, shall be installed as required by the City Engineer. When a subdivision includes a portion of a major street or a collector street, the remainder of which outside of the subdivision is not paved, an all weather two lane street at least twenty-four feet wide may be constructed in the interim as approved by the City Engineer. Financial assurances, in the amount necessary for completion of the ultimate improvements of the major street or a collector street, shall be filed with and retained by the City. In the case where there is an unimproved street or roadway easement between the subdivision and the improved City street system, an interim all weather two lane street at least twenty-four feet wide shall be constructed to a standard approved by the City Engineer to connect the subdivision to the improved street system. Any interim roadway shall have sufficient culverts and drainage facilities to allow a 25-year frequency storm to pass under the road section and a 100-year frequency storm to pass over the road section at a depth not to exceed 6” of water. Dead-end streets extending 200 feet or more and dead-end interim roads shall be graded and have an all-weather surface with a temporary minimum 50-foot radius turning circle.

- C. Utilities.** The subdivider shall be responsible to make the necessary arrangements with each of the serving utility companies involved for the installation of the underground facilities.



Letters from each of the serving utility companies indicating that said arrangements have been made shall be submitted to the City Engineer at the time the final subdivision plat is submitted for approval.

D. Monuments. Permanent monuments shall be installed along the easement and right-of-way lines, including drainage easements, and in accordance with current City standards at all corners, angle points, and points of curve and in the center at all street intersections. After all improvements have been installed, an Arizona Registered Land Surveyor shall check the locations of the monuments and certify their accuracy.

1. Iron pins shall be set at all lot corners, angle points and points of curve for each lot within the subdivision within one year of final plat approval and before the recording of the final plat. Permanent brass cap in concrete monuments shall be set for all subdivision points that are located in the public rights of way. These are to be placed in accordance with the applicable MAG standard.
2. Blue Reflective Markers shall be placed in the center of the right-of-way of all paved streets across from each fire hydrant.

SEC. 7.2 SUBMITTAL REQUIREMENTS.

A. General:

1. It shall be the responsibility of the subdivider to have an Arizona Registered Professional Engineer, in the correct discipline, prepare a complete set of engineering plans and reports for construction of all required improvements and an Arizona Registered Landscaped Architect prepare a complete set of landscape plans. All plans submitted to the City shall be stamped/sealed by the professional who prepared them. Such plans shall be based on the approved preliminary plat and be prepared in conjunction with the final plat and in accordance, with all applicable City, County, or State standards.
2. All Improvement plans submitted to the City of Eloy for approval must be submitted on 24"x 36" sheets of blue or black line paper prints. The scales chosen for plans shall be such that existing features, proposed construction and any other information to be provided will be depicted in a clear, uncluttered, understandable manner. Water system, sewer system and street paving improvements should be drawn at a horizontal scale of 1 inch equals 40 feet and a vertical scale of 1 inch equals 2 feet, unless the City Engineer approves the use of another scale. Plans for other purposes may require the use of a larger or smaller scale.
3. Water and sewer improvement plans shall be submitted on the same set of plans, but shall also show on the paving plans. Separate grading and drainage plans shall be submitted.

B. Improvement Plan Submittal Requirements:

1. Initial Submittal with Final Plat: The following sets of plans and reports along with the required fees shall be submitted to the City Planning Department:
 - Improvement Plan Review Fee.



- Final Plat Review Fee.
 - 7 Copies of the Final Plat.
 - 7 Sets of Water and Sewer Improvement Plans.
 - 7 Sets of Paving, Grading, and Drainage Improvement Plans.
 - 7 Sets of Landscape Improvement Plans.
 - 2 Copies of the Final Drainage Report.
 - 2 Copies of the Final Geotechnical Report.
 - 2 Copies of the Final Traffic Report.
 - 2 Copies of the Boundary Closure.
 - 2 Copies of the Subdivision Deed Restrictions.
2. The final plat should be in final form showing all information including dedication statement, signature blocks, and other notations as necessary.
 3. Subsequent submittals will require that the redline check prints be submitted in addition to the number of sets outlined in the initial submittal requirements.
 4. Final Submittal: The following information, documents and material shall be submitted to the City Planning Department:
 - 2 Copies of Engineers Cost Estimate.
 - Improvement Plan Mylar Cover Sheet.
 - 3 Copies of the Final Plat (paper prints).
 - 8½" X 11" photo mechanical transfer (pmt) of the Final Plat.
 - 8½" X 11" pmt of the Final Landscape Plan.
 - A.L.T.A. Title Report (current to the date of final plat recordation).
 - Assurance of Construction (refer to Sec.7.4 for specifics).
 - Utility companies Approval and Clearance Letter.
 5. City Recordation Submittal: The following fees, documents and plans shall be submitted to the City Planning Department after the City Engineer has approved the improvements plans and the City Council has approved the final plat:
 - Recording fees (for Final Plat and CC&R's).
 - 1 Original signed Deed Restrictions.
 - 1 Photo mylar, (not ammonia process) for County Records.
 - 1 Mylar sepia, not less than 3 mil, for City Records.
 - 1 Mylar sepia, not less than 3 mil, for Project Engineers' Records.
 - 3 Copies Approved Improvement Plans (paper prints).

C. Water Service Requirements:

1. Prior to the recordation of any final subdivision plat affecting all or any portion of the property, the developer shall obtain Arizona Department of Water Resources (ADWR's) consent to modify the City's "Designation of Assured Water Supply" so that the City's demonstrated ground water supply (the "physical, legal and continuous availability demonstration") shall be enlarged in amounts sufficient to serve the property.



2. The developer shall extinguish all grandfathered groundwater rights and transfer all credits related to the property to the City, and/or otherwise meet all requirements of this section, as a condition of new water service. Until all grandfathered groundwater rights have been extinguished, prior to the recordation of any final subdivision plat affecting all or any portion of the property, the Developer shall extinguish a sufficient quantity of grandfathered groundwater rights and transfer to the City all assured water supply credits that may be issued by the ADWR resulting from the extinguishment of said grandfathered rights as are necessary for the City to remain designated as having an assured water supply for the portion of the property affected by said subdivision plat. All phases of a development, after all grandfathered groundwater rights related to the property have been extinguished with credits transferred to City, shall be served by renewable water sources, including surface, effluent, effluent recharge, Central Arizona Project (CAP) and CAP recharge, at no expense to the City or its customers located outside of the property.
3. In accordance with water service agreements to be entered into between the City and the developer prior to the City's delivery of water to the property, the developer, will construct, to all applicable standards, the necessary water infrastructure to serve the property, which shall include such water treatment, storage, recharge, pumping and delivery systems as may be necessary for the City to remain designated as having an Assured Water Supply for the property. The developer further agrees that the City shall be entitled to any and all storage and recharge credits resulting from the facilities and programs constructed and implemented as part of this requirement. Recharge credits resulting from the use of such facilities originating from the property shall be attributed to the development for purposes of meeting its assured water supply obligation herein. Upon completion of the construction warranty period the developer will convey the completed and accepted water service infrastructure to the City for operation and maintenance. Upon conveyance by the developer, and acceptance by the City of the water service infrastructure, the City shall, at its own cost and expense, operate and maintain such infrastructure.
4. The developer acknowledges that the City reserves the right to pass through Central Arizona Groundwater Replenishment District (CAGRD) replenishment assessments to water customers located within the property, where the City's obligations to provide water to such users are the cause of the City having incurred CAGRD assessments.

D. Landscape Plan Submittal Requirements:

1. Preliminary Landscape Plan: A preliminary landscape plan, prepared by an Arizona Registered Landscape Architect, shall be submitted as part of the "Stage 2 - Preliminary Plat Application" and shall at a minimum contain the following:
 - a. Call out the location of all proposed species and inorganic ground covers, sidewalks, paths, curbing, fencing, walls, benches, ramadas, fountains, and waterways. For fencing and walls, provide a preliminary graphic representation as to what is intended relative to the fencing and wall themes.
 - b. Right-of-way landscaping is required. The entire area of the right-of-way,



between street property line and back of curb (B.O.C.) and/or pavement except for approved driveways, walkways and bike paths, shall be landscaped.

- c. Include a plant palette, in list form, on the landscape plans that call out all proposed plant species and inorganic ground covers.
 - d. Identify existing and proposed lots, streets, fences, walls, wells, or other features as may be applicable.
 - e. Identify the line of sight requirements of the City, County and State.
 - f. Identify the name of the developer, project engineer, and landscape architect on the plan.
2. Final Landscape Plan: A final landscape plan shall be prepared by an Arizona Registered Landscape Architect and shall be submitted as part of the final plat and improvement plan submittal and shall at a minimum contain the following:
- a. Final Irrigation Plan.
 - b. Plant Location: Call out the location of all proposed species and inorganic ground covers, sidewalks, paths, curbing, fencing, walls, benches, ramadas, fountains, and waterways. For fencing and walls, provide a final graphic representation as to what is intended relative to the fencing and wall themes.
 - c. Right-of-way landscaping is required. The entire area of the right-of-way, between street property line and back of curb (B.O.C.) and/or pavement except for approved driveways, walkways and bike paths, shall be landscaped.
 - d. Plant Species: Include the approved preliminary landscape plan plant palette, in list form, on the landscape plans that call out all proposed plant species and inorganic ground covers.
 - e. Plant Sizes: Call out the specific sizes of all proposed plant and inorganic ground covers. This information shall be included within the plant palette list on the landscape plan.
 - f. Plant Quantities: Call out the exact quantities for each species of tree, shrub and ground cover per each size and species. This information shall be included within the plant palette list on the landscape plan.
 - g. Paths, Trails, Sidewalks: Call out the material type, width and depth of the surfacing of all proposed paths, trails and walks.
 - h. Walls/Fencing: Call out the type and location of proposed perimeter subdivision walls/fencing and entry monumentation. Indicate exact material types for all fencing and walls and entry monumentation proposed. A separate 24" X 36" wall/fence sheet may be required to be submitted as part of the improvement plan submittal.



- i. Identify existing lots, streets, fences, walls, wells, or other features as may be applicable.
- j. Identify the line of sight requirements of the City, County and State.
- k. Identify the name of the developer, project engineer, and landscape architect on the plan.

E. Report Submittal Requirements:

1. Preliminary Drainage Report: A preliminary drainage report shall be submitted as part of the “Stage 2 - Preliminary Plat Application” and shall at a minimum contain the following information:
 - a. Delineation of the boundaries of on-site and off-site drainage areas.
 - b. Identify the drainage pattern for all existing and proposed streets and building sites. Label by number the different critical points and where inlets/outlets are to be located.
 - c. Justify the runoff factor (C-factor) used in the computations for a typical lot cross-section and street.
 - d. If storm runoff flows onto the property to be developed from the adjacent properties, this must be described in detail. Drainage area, calculated peak flows, velocity and other pertinent runoff data must be presented. If the flow is in a defined channel, the channel must be improved. Special consideration for joint use of open channels is to be given on each individual project. The runoff from areas outside the development may be realigned through the new development.
 - e. Indicate the retention volume required, and provided. Indicate the method for draining basins in 36 hours, and who is responsible for maintenance.
 - f. Provide location of all drainage easements.
2. Final Drainage Report: Two (2) copies of a final drainage report shall be submitted as a part of the improvement plan submittal for all developments. The report shall be a complete report and not an addendum to the preliminary drainage report. The format shall be as previously described and include the following additional information.
 - a. Place inlets wherever the flow exceeds the street capacity. The inlets are to be analyzed separately and catch basin computations shall be submitted.
 - b. Size the storm drains and culverts and submit design computations.
 - c. Final retention basins calculations including 36-hour percolation rates.
 - d. Final channel flow calculations taking into account the impacts of landscaping and other joint use impacts on the cross-section and Mannings



coefficients.

- e. Adjusted calculations for pre and post development conditions.
3. **Geotechnical Report:** Two (2) copies of a geotechnical report shall be submitted as part of the “Stage 2 - Preliminary Plat Application” and shall at a minimum contain the following information:
- a. Identifies any special geotechnical hazards, and develops recommendations regarding the hazards, grading, foundations and pavement.
 - b. The geotechnical hazards portion shall consider at a minimum expansive soils, soil creep, landsliding, and groundwater.
 - c. The grading and foundations portion of the report shall include data regarding the distribution and engineering characteristics of the various soil materials; data about groundwater levels; an opinion regarding the geotechnical feasibility of the development as planned; recommendations about any needed mitigation measures for geotechnical hazards, grading criteria and foundation design criteria and any other pertinent information.
 - d. The pavement design portion shall include data regarding the distribution of various subgrade materials and for each, design test such as R-value. The design procedure and all assumptions used to determine the pavement section shall be presented. The selected design procedure as per the traffic and geotechnical report shall not result in a lesser pavement section than the minimum allowed in Section 6 of this Ordinance.
4. **Preliminary Traffic Report:** All traffic study information shall be prepared by a Registered Professional Traffic Engineer or Civil Engineer with adequate experience in transportation engineering. A preliminary traffic report shall be submitted as part of the “Stage 2 - Preliminary Plat Application” and shall at a minimum contain the following information:
- a. A project trip generation report that provides an analysis of the number of trips generated by the development during a weekday in a one-hour A.M. and P.M. peak hour and daily traffic. Trip generation shall be developed utilizing the Institute of Transportation Engineers Trip Generation Manual.
 - b. An analysis of the non-vehicular modes of transportation (e.g. sidewalks, multi-use pathways and trails) proposed for the development and their impact on the trips generated by the development.
5. **Final Traffic Report:** If the number of peak hour trips generated by the development is greater than 100 trips, two (2) copies of a final traffic study shall be provided. The City Engineer may require a final traffic study to be provided for projects with a peak hour trip generation of less than 100 trips because of safe access concerns. The final traffic study shall include the following information:
- a. Introduction which outlines the land use, site and study boundaries, and



existing and proposed site uses.

- b. Project trip generation estimates (A.M., P.M., and A.D.T.).
- c. Project access and internal circulation evaluation.
- d. Trip distribution.
- e. Trip assignment.
- f. Existing and projected traffic volumes.
- g. Capacity analysis of all impacted public/private street intersections and access points.
- h. Level of service with a minimum service of Level 'C'.
- i. Evaluation of existing and existing-plus project conditions, as well as cumulative and cumulative-plus project conditions.
- j. Project impacts and mitigation measures (recommendations to include the proposed recommended improvements, volume/capacity analysis at critical points, traffic volume proportions for funding of improvements),
- k. Other special requirements, as determined by the City Engineer.

SEC. 7.3 IMPROVEMENT PLAN REVIEW PROCESS

- A.** Copies of plans shall be submitted to the City and shall be distributed by the City to the appropriate agencies.
- B.** The City staff will review the submittal for accuracy, completeness, compliance with stipulations made by the Commission or City Council, requirements of the Subdivision Technical Review Committee, and conformance with all City Codes.
- C.** Marked up prints will be returned to the Developer's Engineer and Landscape Architect of record for corrections, additions and revisions.
- D.** Within 90 days from the date of City Council approval, and prior to the recording of the Final Plat and Deed Restrictions, the following items must be submitted:
 - 1. A project approval letter, signed by the City Engineer, stating that all of the subdivision improvement plans and reports have all been approved by the City.
 - 2. A project approval letter, signed by the Zoning Administrator, stating that any and all required agreements between the City and subdivider have been executed.
 - 3. A letter of agreement from the serving utilities stating the availability of utilities and the approval of improvement plans for the subdivision.
 - 4. The required Financial Assurance for Construction.



- E. If the engineering plans have not been approved within 90 days, solely due to reasons on the part of the subdivider, the Council may require that the final plat be resubmitted.

SEC. 7.4 ASSURANCES BY SUBDIVIDER

A. Agreement by Subdivider:

1. The subdivision improvements in an approved development may be constructed in practical increments in accordance with a Council approved Phasing Plan subject to provisions for satisfactory drainage, traffic, circulation, utilities, landscaping and other elements of the total development plan.
2. The improvements shall be constructed in accordance with plans approved by the City Engineer and shall be completed within an agreed specific time period.
3. The subdivider shall give adequate Financial Assurance for Construction for each phase in accordance with this Ordinance and to the satisfaction of the City Engineer and City Attorney.
4. Once a construction permit has been issued for improvements under the Financial Assurance of Construction, work shall proceed without interruption until the City Engineer accepts the improvements.
5. Any work shown on approved plans that has been abandoned for a period of thirty (30) days, or not completed by the subdivider in accordance with an agreed upon time period, may be completed by the City which may recover the construction costs from the subdivider.
6. When in the opinion of the City and the developer it is in the best interest of both parties to delay installation of development required improvements to coincide with adjacent work the City Council may elect to accept payment of the estimated cost of said improvements in-lieu of construction by the developer. The timing of this payment will be specified in a Council approved Phasing Plan.

B. Financial Assurances of Construction:

1. The City Council shall require that the applicant provide cash, a performance bond from a corporate surety licensed to do business as a surety in Arizona, an irrevocable letter of credit, or funds in escrow at the time of application for final subdivision approval in the amount sufficient to secure to the City the satisfactory construction, installation, and dedication of the required improvements. The amount of the financial guarantee shall be one hundred (100%) percent of the cost of the installation and materials necessary to complete the subdivision.
2. Such financial guarantee shall comply with all statutory requirements and shall be satisfactory to the City Attorney as to form, sufficiency, and manner of execution, as set forth in this Ordinance. The periods within which required improvements must be completed shall be incorporated in the financial guarantee and shall not, in any event, exceed two years from the date of final approval. The City shall require that



ten (10%) percent of the total cost of public improvements be retained by the City for the duration of the warranty period which begins from the "Date of Acceptance" of said improvements by the City Council.

3. Whenever it is deemed necessary by the City Engineer and the City Council to defer, for an additional two-year period, the construction of any required public improvements, because of incompatible grades, future planning, inadequate or lack of connecting facilities, or for other suitable reasons, the subdivider shall provide renewed assurances based on updated costs as determined by the City Engineer to secure completion of the required public improvements.

SEC. 7.5 CONSTRUCTION AND INSPECTION

- A. All improvements whether public or private shall be constructed to the latest Uniform Standard Specifications for Public Works Construction as written and promulgated by the Maricopa Association of Governments (MAG) or the latest standards and specifications adopted by the City.
- B. All improvements shall be constructed with the inspection and approval of the City Engineer. All construction shall require a City construction permit. Construction shall not begin until a permit has been issued for such construction.
- C. Public utilities must be installed either in public dedicated rights-of-way or public utility easements or easements dedicated specifically by the landowner for such usage and maintenance.
- D. All underground utilities to be installed in streets and public access ways, shall be constructed prior to the surfacing of such street or private access way.
- E. The developer shall provide for an Arizona Registered Engineer to be present on the site for sufficient time to assess compliance with the plans and specifications for each element of construction.
- F. The City Engineer shall be notified 48 hours prior to any construction on the project site.
- G. The City Engineer shall be notified upon completion of all underground utilities within the street right-of-ways and prior to any street preparation work. Interim as-built plans of the utilities and all passing tests results shall be submitted for review. Upon review and approval of the supplied information, the developer may proceed with the installation of street improvements.
- H. The developer's engineer shall request the City Engineer to perform inspections of the subgrade base prior to placement of the overlaying materials. In addition the City Engineer will perform periodic inspections throughout the course of the construction. These inspections or approvals do not signify that the City has accepted any of the improvements for maintenance.
- I. The developer's engineer shall submit progress reports to the City Engineer throughout the construction as requested by the City Engineer. The progress reports shall include the results of all tests taken.



- J. Testing during the construction phase of the project shall be done as required by the City Engineer.

SEC. 7.6 SUBDIVISION IMPROVEMENT ACCEPTANCE

- A. General: Upon completion of all subdivision improvements and installation of monumentation the City Engineer will perform a final inspection and review the final reports and as-built drawings for approval.
- B. Final Inspection: At completion of the project a final inspection shall be requested with the City Engineer. At the time of request for the final inspection one set of mylars and two sets of blue-line as-built drawings shall be submitted along with a final engineers' report and warranty statement to the City Engineer. The as-built drawings shall be certified and contain the following statement:

"I certify that the construction of the public improvements and the "as-built" plan preparation were performed by me or under my direct control and supervision. The construction details as shown on the as-builts are accurate and complete to the best of my knowledge and belief."

Arizona Registered Engineer

Date & Registration Number

- C. Final Report: A final report shall be submitted upon completion of the project. The final report shall be compiled by the developers' engineer and shall include the following:
1. A brief statement of the testing on the project and a statement as to whether the observations and tests indicate that the various materials in place comply with the plans and specifications.
 2. A summary of all field density test and compaction tests on trench backfill, on street subgrade and base material and on any fill material.
 3. Asphalt and pavement mix design and all results of Marshall, gradation, asphalt content and compaction tests.
 4. All concrete mix designs and all test results on air content, slump, unit weight, compressive strength at 7 and 28 days.
 5. All line pressure, bacteria and manhole test information.
 6. Any other tests or information that may be required as a part of the specifications or that may add to the integrity of the report.
- D. Procedure: The following procedure will be followed for final acceptance of the improvements:
1. The City Engineer shall make a final inspection of all public improvements in the



project. The developer will be notified of any items that are not in conformance with the City specifications, and shall bring the items into conformance.

2. The as-built plans and final report will be reviewed by the City Engineer. Any additional information needed will be noted and the plans will be returned to the developer for revision and resubmittal as mylars.
3. When the public improvements have passed the final inspection, the “as-built” plans and final report have been stamped and approved and the warranty statement provided, the City Engineer shall make a written recommendation to the City Council to accept the public improvements for maintenance.

E. Warranty Period on Public Improvements: The warranty period begins on the day that the City Council accepts the public improvements. At a minimum the M.A.G. Standard warranty period of one (1) year shall apply to all subdivision improvements; however the warranty period may extend beyond that time period as determined by the City Engineer. During the warranty period the developer is responsible for repair work to any of the public improvements. The City Engineer will periodically inspect the public improvements and will notify the developer of the necessary repair work. The developer is responsible for having the repair work completed prior to the end of the warranty period. Upon completion of the warranty period and acceptable repair of any necessary warranty items the remainder of the financial assurances retained by the City will be released.

